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No. III.

**LADLE FOR PAYING THE SEAMS OF SHIPS.
IMPROVED PITCH-KETTLE.**

The sum of TEN GUINEAS was this session presented to Mr. RICHARD SOAPER, of the Royal Dock-yard, Devonport, for his improved LADLE FOR PAYING THE SEAMS OF VESSELS WITH PITCH, and for his improved PITCH-KETTLE. Models of each have been placed in the Society's repository.

IN paying the seams of a ship with pitch (which is done to keep in the oakum with which the seams are stopped) a mop is the instrument commonly made use of. This being dipped into a kettle of hot pitch takes up a certain quantity, and is then rubbed over the seam, care being taken to force in the pitch as accurately as possible. A mop, however, is a very awkward implement for this purpose, being much too large to adapt itself to the seams. Hence a large portion of the pitch requires to be scraped off again, and much falls down on the ground, and is lost. A farther disadvantage is, that the mop presents so large a surface to the air, that in cold weather the greater part of the pitch congeals on its surface, thus occasioning a very serious loss of time.

Mr. Soaper employs, instead of the mop, a ladle with a movable lip, which fits the seams, and thus conveys the pitch into them when boiling hot, and therefore in its state

of greatest fluidity. By this contrivance hardly any loss of pitch is incurred, and a great saving of time is also obtained.

In the ordinary way of applying pitch, much falls to the ground, where it gets mixed with chips, shavings, and other impurities; that portion which is scraped from the sides or deck is also in a similar condition, and both are frequently thrown away as useless. Mr. Soaper turns these scraps to good account by connecting a strainer with the ordinary pitch-kettle, which detains the impurities and allows the pitch to drop through.

The above contrivances, though apparently very simple and obvious, appear not to have been introduced into any of our dock-yards previous to the suggestion of Mr. Soaper; and are certainly calculated to save, in that department of public service, much expenditure and still more valuable time.

Reference to the figures of Mr. Soaper's Pitch-ladle and Pitch-kettle.—Plate I.

FIG. 8. *p p* A portion of the side of a ship, *q* a seam to be pitched, *r* a ladle, *s* the spout, *t* a lip joined to the ladle at *v*, under the spout, and open against the ship, *u* a tail or heel-piece to butt against the ladle and prevent its dropping lower than level, *w* an iron apron under the mouth-piece *t*, and flush with the cheeks *x x*, to fit against the ship's side.

Fig. 9. A bird's eye view, having the joint-pin *y* taken

out to separate the ladle from its mouth-piece *t*; *z* the front edge of the mouth-piece bottom, which projects beyond the apron *w* and cheeks *x x*, to enter the seam; *a a* two solid ears to fill up the seam on each side, and prevent the pitch running out; the dotted line *p p* shows the surface of the planks. When the mouth-piece *t* is applied to the seam the ladle is turned on the joint *v* (as shown by the dotted line *r*, fig. 8,) to pour its contents in the mouth-piece *t*, and from thence it runs into the seam.

Fig. 10. *b b* A section of a pitch kettle, *c d* the ordinary lid with its joint; this lid carries another vessel *e e*, the bottom of which is perforated with small holes to serve as a strainer. In this upper vessel is put the pitch which has fallen on chips or dirt, and the pitch as it melts runs through into the kettle, leaving the dirt above the lid of the strainer *f*.

Fig. 11. A bird's eye view. The kettle is drawn on a much smaller scale than the ladle.